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ABSTRACT

This essay posits a problem of "fit" between five streams of reform (subject matter teaching, diverse student populations, uses of student assessment, social organization of schooling, and professionalization of teaching), and prevailing configurations of teachers' professional development. It argues that the dominant "training" model of teachers' professional development, a model focused primarily on expanding an individual's repertoire of well-defined classroom skills, is not adequate to the ambitious visions of teaching and schooling embedded in present reform initiatives. The paper begins by posing ways in which current reform movements shape challenges, possibilities, and constraints for teachers' professional development. Section 2 frames a policy dilemma that revolves around the limitations of the dominant training paradigm. A third section introduces principles that seem especially congruent with reform requirements, together with examples of four options that appear to hold promise: (1) teacher collaboratives and other networks; (2) subject matter associations; (3) collaborations targeted at school reform; and (4) special institutes and centers. The final section outlines emerging issues that bear on the fit between reform imperatives and teachers' professional development such as the complexity and uneven pace of systemic reform, problems of "fit," and the school work place and teachers' opportunity to learn. (Contains approximately 75 references.) (Author/LL)

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Teachers' Professional Development in a Climate of Educational Reform

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Overview

This essay posits a problem of "fit" between five streams of reform and prevailing configurations of teachers' professional development. It argues that the dominant "training" model of teachers' professional development—a model focused primarily on expanding an individual repertoire of well-defined and skillful classroom practice—is not adequate to the ambitious visions of teaching and schooling embedded in present reform initiatives. Emerging alternatives to the training model, though small in scale, embody assumptions about teacher learning and the transformation of schooling that appear more fully compatible with the complex demands of reform and the equally complex contexts of teaching.

The essay begins by posing some of the ways in which current reform movements shape challenges, possibilities, and constraints for teachers' professional development. Section two frames a policy dilemma that revolves around the limitations of the dominant training paradigm for purposes of achieving the reform agenda. A third section introduces principles that seem especially congruent with reform requirements, together with examples of four options that appear to hold promise. The final section outlines selected issues that bear on the fit between reform imperatives and teachers' professional development and that thereby inform the criteria for assessing professional development policy choices.

Two caveats preface the broader argument. First, the discussion concentrates exclusively, or nearly so, on teachers. For principled and pragmatic reasons it places teachers at the center, even while acknowledging the ways in which entire institutions, and all the roles and relations they encompass, are implicated in any reform effort. Second, the essay reflects certain reservations about any stance that places teachers solely or largely in the role of "implementers" of reform. To be sure, reforms pose certain technical demands—demands on the knowledge, skill, judgment, and imagination of individuals. In that sense, the implementation problem at the level of the classroom is real. But reforms also convey certain values and world views. They communicate a vision of what it means to learn, and what it means to be educated; they communicate a vision of schools and teaching, of students and teachers. They are to greater or lesser degrees compatible with the organizational structures and cultures in which persons work. In these crucial ways, powerful reform ideas engage teachers in a broader consideration of the educational enterprise both in and beyond the classroom.

Professional development in the service of "implementation" may obscure questions related to purpose, and may mask the internal contradictions and tensions within and across reform initiatives. To make sensible critiques of proposed reforms requires getting at their underlying assumptions, their social and historical context, the degree to which they are congruent or not with teachers' existing beliefs, commitments, and practices, their probable consequences for students, and the ways in which they vary or converge across communities. By this argument, one test of teachers' professional development is its capacity to equip teachers individually and collectively to act as shapers, promoters, and well-informed critics of reforms. The most robust professional development options will locate problems of "implementation" within this larger set of possibilities.

I. Professional Development and the Reform Agendas

Five streams of reform, both singly and in combination, present complex challenges to teachers as individuals and as members of a wider professional community. Those challenges are illustrated, though not exhausted, in the descriptions that follow. The test of teachers' professional development opportunities resides in their capacity to engage teachers in the kinds of study, investigation, and experimentation required to understand and undertake the multiple challenges described here, and to grasp the relationships among them.

Reforms in subject matter teaching (standards, curriculum, & pedagogy)

Reforms in subject matter standards, curriculum content, and pedagogy increasingly aspire toward more ambitious student outcomes. Among them one would count the shift to a whole language and literature-based approach to language arts, the new mathematics standards, proposals for integrated science curricula and the like. Among them, too, one would place conceptions of "authentic achievement" that require a fundamental change in the nature of students' intellectual tasks and teacher-student relations (Newmann, 1990). These reforms constitute a departure from canonical views of curriculum and from textbook-centered or recitation-style teaching. They demand a greater facility among teachers for integrating subject content, and for organizing students' opportunities to learn. They represent, on the whole, a substantial departure from teachers' prior experience, established beliefs, and present practice. Indeed, they hold out an image of conditions of learning for children that their teachers have themselves rarely experienced.

In addition, individual teachers may be pressed to move on many fronts at once (see Hargreaves, 1990, 1992; Little, 1992a). Elementary teachers must absorb the changes in content and method associated with an entire spectrum of the elementary curriculum. The rotating "curriculum adoption" schedules for the California state frameworks, for example, could keep elementary teachers permanently in "implementation of innovation" mode—an exhausting prospect. Secondary teachers are asked to consider possibilities for interdisciplinary curricula at precisely the time they are asked to reconsider their approaches to subject matter teaching—the latter reinforced by new state curriculum frameworks, standardized test protocols, subject-specific university admission requirements, textbook design, and the like. Meanwhile, reforms aimed at "critical thinking" sit in tension with the basic skills reforms that began in the 1960s and are still a prominent part of the urban school improvement landscape (Carlson, 1992).

Reforms centered on problems of equity among a diverse student population

Equity reforms respond to the persistent achievement disparities among students from differing family backgrounds, and are aimed at altering both the demonstrated achievement and school completion rates of the lowest achieving groups. Over the past decades, such reforms have centered largely on remedying individual student deficiencies. Although more recent analyses have pointed with increasing specificity and persuasiveness toward institutional structures and norms that define and contribute to student failure (for example, Fine, 1991; Oakes, 1985, 1992), programmatic remedies continue to focus on students' individual skills (and deficits). (We could ask the question, for example, Why does tracking

in the high school persist despite so much discrediting evidence?). There are a few exceptions in which reforms in school organization target specifically the structures of students' opportunity to learn; these range from the charter schools experiment in Philadelphia high schools (Fine, 1992) to a single teacher's efforts to "untrack" an Advanced Placement English class (Cone, 1992). By comparison to individualistic remedies (to what is arguably a systemic and structural problem), these efforts are few in number; most school "restructuring" proposals are founded on other assumptions and strategies.

Advances in professional development, too, have centered on problems of diversity and equity in individual classrooms—assisting teachers to identify and alter classroom practices that contribute to student failure and that undermine "equal opportunity to learn." The most promising of these efforts engage teachers collectively in studying classroom practices in ways that sometimes lead to more systemic changes at the school level (Cochran-Smith and Lytle, 1992; Cone, 1992). They do so by building a norm conducive to the close scrutiny of well-established practices and by building a capacity for organizational change.

Reforms in the nature, extent, and uses of student assessment

Reform proposals argue for more widespread and rigorous use of authentic assessment. Yet the technical advances in assessment have typically lagged behind the formulation of standards and the advances in curriculum design. State and local policy makers continue to judge the success of reform efforts on the basis of standardized test scores. Components of statewide tests that strike teachers as most "authentic" (for example, writing samples or open-ended math reasoning items) are also those most difficult and expensive to develop and to score. In areas other than language arts and math, they may also be relatively underdeveloped—especially where they call for synthesis across subject areas, as in the "exhibitions" favored by the Coalition for Essential Schools. At the local level, teachers' expressed interest in and commitment to alternative forms of assessment far exceeds their professed skill and confidence in constructing, evaluating, or incorporating such alternatives—and also exceeds the resources presently available from the research and test development communities. Yet local discussions do not and cannot wait upon the psychometricians' advances. In schools embarked upon "reinventing," "redesigning," and "restructuring" themselves, teachers wrestle with the criteria for good work, and the forms in which it might be expressed.

Reforms in the social organization of schooling

The recurrent strains of criticism throughout the1980s culminate in the widespread agreement that business as usual will not suffice. The convergence of interest (and funds) around the broad image of "school restructuring" has been quite astounding. The call to more systemic reform permeates initiatives in "school restructuring" supported by states, private foundations, and, to a lesser extent, projects sponsored by teachers' associations in concert with local schools and districts.

The most ambitious of these initiatives have in common that they are oriented toward principles, not programs or specific practices. The Coalition of Essential Schools, for example, is united by a commitment to nine principles for the "redesign" of secondary schools (Sizer, 1992). Predictably, teachers' commitments to these principles are provisional and uneven—in that regard, we have what might appear to be a conventional "implementation of innovation" situation. But the dilemma for school leadership and for professional development goes far deeper in this instance: there is no well-developed picture of what these principles look like in practice. In the scramble to define a model, isolated cases of success become the focus of lore—Central Park East springs to mind, but few others

(Meier, 1992). And no matter how persuasive the precedent set by any success story, broad principles require close attention to each local context. To fit opportunities for professional development to a campaign for the principled redesign of schooling is arguably a different matter indeed from organizing the training and support to implement a program or a set of readily-transferable practices. Yet we lack descriptions of restructuring initiatives that supply a detailed portrait of the learning demands on teachers and the corresponding professional development responses.[1]

Reforms in the professionalization of teaching

The "professionalization" reforms at the national and state levels center on teachers' demonstrated knowledge base (as reflected in standards for preparation program accreditation and candidate assessment) , on conditions surrounding teacher certification and licensure, and on the structure of career opportunities in teaching. At the local level, professionalization tends to take the form of extended assistance to new teachers, expanded career opportunities for experienced teachers, and experiments in site-based decision making. For purposes of this paper, these reforms are interesting principally for the way in which they bear upon the four reform movements discussed above—that is, for the way in which they equip teachers both individually and collectively to play an informed and active role in defining the enterprise of education and the work of teaching.

This is not the place to repeat all the major arguments surrounding the professional standing of the teaching occupation, although the reforms have spawned a large and growing literature. Two comments seem germane. First, state and local policy makers seem most readily disposed to support appeals to "professionalization" where they see it as (1) sustaining a reasonably well-prepared and stable teacher workforce; and (2) coupled with assurances of local accountability for student outcomes. Second, initiatives that promise "professionalization" of teaching increasingly expand opportunity and reward in exchange for increased obligation. Teachers are expected to contribute to the support of beginning teachers and to participate in other ways in the improvement of schooling and teaching.

These five streams of reform cannot be done well piecemeal, nor are they reforms that succeed if attempted only in isolated classrooms. As Fine (1992) puts it, the present ventures pursue the "big systemic, educational question..." of transforming whole systems into "educationally and emotionally rich communities of learners." (p. 2). This suggests quite a different organization of learning opportunity (and obligation) than one that supplies teachers with measured increments in knowledge, skill, and judgment from a known pool of "effective" classroom practices.

II. The Policy Dilemma

Three assertions help to shape the policy problem. They are derived in part from studies that reveal the dominant configurations of professional development opportunity (Little, 1989, 1992b), and in part from emerging research and other commentary on the demands that multiple reform initiatives present to teachers (Fine, 1992, in press; Little, 1992a; Meier, 1992).

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[1] Such descriptions may be in the making. For example, see Fine (in press), Evertson and Murphy (in press), and Murphy (1991).

1. ***The well-tested models of skill development, built on the staff development and implementation-of-innovations literatures, will work reasonably well to introduce those aspects of reforms that are "technical," or can be rendered as a repertoire of classroom practices***. Among the possibilities generated by the five streams of reform, for example, are training programs in which outside experts or experienced colleagues introduce teachers to various models of cooperative learning, to the uses of manipulatives in mathematics instruction, or to methods for organizing portfolio assessment of students' work. On the basis of research into the conditions of teachers' "skill transfer," the practices associated with skill training have demonstrated increasingly greater sophistication (for example, Joyce, Murphy, Showers, and Murphy, 1989; Sparks and Loucks-Horsley, 1990). Effective training has come to be defined largely by its ability to provide adequate opportunities for practice and to provide for classroom consultation and coaching as teachers learn to use new ideas. All in all, then, we might make some substantial gains in some arenas if we more uniformly and consistently made use of what we have learned about the organization of training and classroom follow-up .

2. ***However, much of what we anticipate in the present reforms does not lend itself to skill training, because it is not readily expressed in terms of specific, transferable skills and practices***. Rather, the present reforms require that persons in local situations grapple with what broad principles look like in practice. In Deborah Meier's terms, we are called upon to "reinvent" teaching and schooling, and to do so even while in the midst of day to day work (Meier, 1992). This aspect of reform calls not for training, but for adequate "opportunity to learn" (and investigate, experiment, consult, or evaluate) embedded in the routine organization of teachers' work day and work year. It requires the kinds of structures and cultures, both organizational and occupational, compatible with the image of "teacher as intellectual" (Giroux's phrase) rather than teacher as technician. And finally, it requires that teachers and others with whom they work enjoy the latitude to invent local solutions—to discover and develop practices that embody central values and principles, rather than to "implement" or "adopt" or "demonstrate" practices thought to be universally effective. This assertion acknowledges both the uncertainty surrounding best practice and the complexity of local contexts.

3. ***Local patterns of resource allocation tend to favor the training model over alternative models***. In the absence of a good fit between the nature of the reform task and the nature of professional development, schools and districts are nonetheless inclined to do *something* in the name of professional development (before the fiscal year ends, the state program expires, or the school board demands results). That something is likely to look very much like the existing menu of training options: workshop series, special courses or inservice days devoted to transmitting some specific set of ideas, practices, or materials to teachers. For example, a decision to expand the available training in cooperative learning is readily defensible: the training is accessible as a well-tested program, and it has a plausible connection with efforts to improve classroom teaching. But such a decision is also problematic on two grounds. First, the investment in packaged programs of training tends to consume all or most of the available resources. The messier and more contentious forms of teachers' involvement required to examine existing practice and to invent new possibilities remain under-supported. Second, the training paradigm tends toward standardized solutions to the problem of "best practice." The more ambiguous aspects of reform—what "authentic assessment" or "integrated curricula" might amount to, for example—are granted comparatively less attention.

So: we know how to do training well, and could profitably do more of it well; the training paradigm, no matter how well executed, will not enable us to realize the reform agendas; and resource allocations for professional development represent a relatively poor fit with the intellectual, organizational, and social requirements of the most ambitious reforms.

III. Professional Development Principles and Practices

As a basis for achieving a more compelling fit, we might seek strategies or mechanisms that embody principles consonant with the complexity of the reform task. This is not to say that these practices and principles will provide the smoothest path to the implementation of reform proposals or initiatives as they are presently charted; to take these principles seriously, for example, could quite prolong the "implementation" of state level curriculum frameworks.

Alternatives to the training model

Four alternatives to the training model rest on a common implicit claim: that the most promising forms of professional development engage teachers in the pursuit of genuine questions, problems, and curiosities, over time, in ways that leave a mark on perspectives, policy, and practice. They communicate a view of teachers not only as classroom experts, but also as productive and responsible members of a broader professional community, and as persons embarked on a career that may span thirty or more years.

Teacher collaboratives and other networks. Subject-specific teacher collaboratives in mathematics, science, and the humanities have grown in size, visibility, and influence over the past decade. Lord (1991) locates the subject collaboratives within an alternative paradigm of professional development in which the vision of teachers' professional development encompasses: " (a) teachers' knowledge of academic content, instruction, and student learning, (b) teachers' access to a broader network of professional relationships, and (c) teacher leadership in the reform of systemwide structures. " (p. 3; see also Lieberman and McLaughlin, 1992).

Two accounts suggest how subject collaboratives equip teachers individually and collectively to deepen their subject knowledge and to assume a more assertive role in the reform of curriculum, pedagogy, and assessment. The first is an account of Philadelphia's humanities collaborative (PATHS); the second centers on the mathematics collaborative +PLUS+, one of several subject matter collaboratives organized under the sponsorship of the Los Angeles Educational Partnership.

PATHS (Philadelphia Alliance for Teaching Humanities in the Schools) engages teachers directly in the modes of inquiry related to the various humanities disciplines. The project's aim to provide urban *students* a genuine curriculum in the humanities—not watered down, dumbed down, or packaged—required a parallel experience for *teachers*. The former project director traces this decision about teachers' professional development in part to the general absence of humanities background in teachers' preservice preparation or subsequent studies: "[M]ost teachers hold degrees in education, psychology and related technical fields; few have been trained as historians, scientists, philosophers. Even those who do hold liberal arts and science undergraduate degrees rarely continued their pursuit of these subjects as graduate students. Advancement in teaching depends on certifications and supervisory credentials, not on learning more about arts and science subjects. " (Hodgson, 1986, p. 29)

The specific program formats employed by PATHS all place teachers in direct contact with the city's rich humanities collections and with the curators and other experts who acquire, maintain, and interpret them. Minigrants were organized to give greater incentives

to collaborative work and to engage teachers with a broader array of material and human resources. "We stacked the deck quite unashamedly"—teachers could receive up to $300 for an individual classroom project, but up to $3000 for collaborative work with other teachers, university people, museums, or libraries (p. 31). One example of a minigrant product is a slide show and teachers' guide on the Ars Medica exhibit for art, science and social studies teachers: "all areas that can benefit from the show on the artistic images of disease and the medical arts through the centuries." (p. 31.) An outgrowth of the minigrant program is the two-week summer institute "Good Books for Great Kids," designed to "enlarge teachers' visions about literature to a much broader range of genres and subjects, and to teach them how to do a search of the literature in a variety of fields that would take them beyond whatever the salesmen from textbook publishers left on their desks." (Renyi, 1992). Using the children's literature collections in the Rare Book Room of the Philadelphia Free Library and in other similar collections, the teachers "did research in these collections and were trained to seek out books in their subject areas by children's librarians, children's literature specialists and special collections experts." At the end of two weeks, each teacher presented an oral defense of an annotated book list comprising trade books, library books, and special collections books; after the defense, the teacher received $500 to spend on trade books in the list and on trips to bring children to the special collections.

Colloquia sponsored by PATHS meet monthly throughout the year. In one, teachers working in Philadelphia's Rosenbach Museum and Library concentrated on manuscripts detailing how 20th century writers revised their work. This arrangement with the Rosenbach permits up to 25 teachers per month to study some aspect of the manuscript collection. The colloquia are oversubscribed, although they offer neither credit nor stipends. Summer institutes in literature, history, and languages (which do offer graduate credit) also are conducted on-site where relevant collections are held. These institutes, like the colloquia, entail an altered set of relations between the schools and other institutions (museums, libraries) and between teachers and other experts. Through activities organized by PATHS, teachers were able to see how curators conducted their own work with primary materials, and to work with those materials themselves. They got "behind the scenes" in museums, libraries, and other archival collections. They came to know not only the materials, but the people who worked with (and interpreted) them. They were able to examine (and sometimes contest) one another's interpretations.

Hodgson remarks: "[Teachers] have been starved (a metaphor teachers themselves use) for serious stimuli, and they are immensely enthusiastic patrons of museum and library collections" (P. 32). When her account is read in juxtaposition with rather common accounts of "unmotivated," "reluctant," or "resistant" teachers, one is struck by marvelously contradictory images of teachers as intellectual beings. In PATHS, we have an oversubscribed colloquium series and avid participants in archival research, while in much of the professional development literature we find a portrait of teacher as troglodyte. Surely there is a lesson here.

In a second example, the Urban Mathematics Collaboratives in more than fifteen major cities engage teachers with mathematicians in industry and higher education, with the combined aims of strengthening the caliber of math teaching and deepening teachers' commitment to all students (equity). The Urban Math Collaboratives have positioned themselves in support of the NCTM standards, though not without substantial discussion and debate, and have issued policy statements regarding equity, student assessment, and teacher professionalism (for example, Urban Mathematics Collaboratives, n.d.).

In Los Angeles, the mathematics collaborative (PLUS) retains structural independence from the participating districts but secures a foothold in the school workplace by inviting departments rather than individual teachers to join. Observers highlight six

aspects of the collaborative's strength: (1) a capacity for teacher support in subject matter teaching that exceeds that of the district or university; (2) a norm of informed and steady experimentation in mathematics teaching; (3) a system of mutual aid that compensates for uneven subject matter preparation among the district's secondary math teachers; (4) sustained involvement with a professional community of mathematicians and mathematics educators; (5) a connection to the classroom that is sustained by teachers' control over the content and format of the collaborative's activity; (6) a broadened conception of professional knowledge and involvement that engages teachers in incorporate debates over the nature of mathematics and mathematics teaching, and also engages them in policy deliberations surrounding math teaching at the local, state, and national levels (Little and McLaughlin, 1991).

Both of these collaboratives, together with various models based on the Bay Area Writing Project, underscore teachers' involvement in the *construction* and not mere *consumption* of subject matter teaching knowledge.[2] They constitute a challenge to intellectual and collegial passivity. Further, they prepare teachers to make informed responses to reforms in subject matter teaching and student assessment without being linked narrowly to specific reform proposals.

Subject matter associations. The place of teachers' professional associations remains nearly invisible in the mainstream professional development literature. We know little about the role played by the largest and most prominent subject matter associations (NCTE, NCTM, NSTA, and others) in the professional lives of teachers or in shaping teachers' disposition toward particular reforms. Although it is clear that the subject associations are exerting an increasingly powerful influence in the articulation of subject curriculum and assessment standards, we have virtually no record of the specific nature or extent of discussion and debate over subject matter reform. In what ways is the ordinary classroom teacher touched by an association's involvement in state and national debate over "standards?" If we were to examine the agendas for state, regional, and national conferences held by these associations, what traces of "reform" would we encounter? How do elementary and secondary teachers experience the demands associated with subject-specific reforms? In what ways are the various subject matter reforms congruent or in conflict? (The Alliance for Curriculum Reform, sponsored by the Rockefeller Foundation, has begun to work with the major subject matter associations to trace the commonalities and differences in the reforms targeted at subject paradigms, subject-related pedagogies, curriculum policy, and assessment.)

Smaller, more informal regional associations have attracted even less policy research attention, yet may prove crucial in shaping teachers' responses to specific reform initiatives. The Curriculum Study Commission (CSC), a long-standing group of English educators spanning elementary, secondary, and higher education, provides a forum for pursuing a wide range of teaching interests linked to the subject discipline. Although the CSC gives serious attention to any reform with crucial implications for teachers' work, it reserves its support for those reforms shaped fundamentally by teachers—as some of the new frameworks, standards, and assessments have been (Wagner, 1991; see also Ellwood, 1992).

In each of these examples—the NCTM and the CSC—we find an instance of teachers' professional community that extends well beyond the school walls, fundamentally

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[2]Throughout these examples are references to teachers' own research and to teachers as researchers. In some important respects, teachers' expanding presence as a distinct community of educational researchers has taken on the character of a movement. Teachers' research—as an intellectual and political enterprise—has been the focus of recent AERA symposia, the subject of a forthcoming NSSE volume (Hollingsworth and Sockett, in press), and a means for investigating the nature of professional community among teachers (Threatt, Buchanan, Morgan, Sugarman, Strieb, Swenson, Teel, and Tomlinson, in press).

independent of the employing organization, but positioned to exert considerable influence on teachers' dispositions toward reform proposals. To the extent that an association's most active members also occupy leadership roles within their schools, districts, or collective bargaining units, the association's effect is multiplied.

Collaborations targeted at school reform. Professional development is one integral feature of some collaborations targeted to school reform. School-university collaborations exhibit something of a rocky history. As instruments of reform, and as sites for professional development, they have had difficulty overcoming long-standing asymmetries in status, power, and resources. As partnerships have evolved, they have moved toward greater parity in obligations, opportunities, and rewards. The Coalition of Essential Schools offers the image of the school "friend," the insider/outsider (generally affiliated with a university) who remains attached to the school to provide support and critique of school progress. The friend, in principle, is a resource to the collective, a way of expanding access to information and other resources. In the Stanford/Schools Collaborative, certain structural mechanisms help to introduce and sustain reciprocity. Governance arrangements achieve parity not only by formal provisions for equal representation, but also by operations that ensure widespread availability of important information (especially information about resources) and provisions for exercising influence in the distribution of resources. Separate planning committees for key program components or events expand representation in decision-making. The committees are a distance-closing device that is particularly crucial to the school-based participants (who have greater numbers), reducing the organizational distance from any one teacher or administrator to a "node" in the decision making net. To the extent that the structure of leadership spans groups and institutions, it helps to permeate organizational boundaries. Organizational boundaries are further blurred by the development of cross-institutional roles (for example, research activities designed and led jointly by teachers and professors, Professor in Residence in Schools opportunities, and the incorporation of classroom teachers as lecturers in the teacher education programs.) However, these cross-institutional roles are still small in number, low in visibility, modest in institutional salience, and perhaps too dependent on individual will.

Various other partnerships employ new conceptions of the university-school relation in the service of particular reform agendas. Faculty from National-Louis University have entered into a partnership with the Chicago schools in support of various subject matter reforms. They express the basic problem this way: "For most elementary school teachers, a very different type of instruction is described in the [Mathematics] Standards than they experienced as students...." In mathematics, for example, "The professional development programs that our Best Practice leaders provide require teachers to become actively engaged in *doing mathematics*." (Chicago Project on Learning and Teaching, 1992, p. 6). The idea is to promote and provoke conceptual breakthroughs in conceptual understanding for the teachers by facilitating mathematical experiences rather than by teaching the teachers mathematical content or methods. A similar investigatory stance toward curriculum and instruction also distinguishes a partnership described by Marilyn Cochran-Smith and her colleagues at the University of Pennsylvania. University faculty, experienced and prospective teachers, and secondary school students in Philadelphia join in research into aspects of a multicultural society (Cochran-Smith & Lytle, 1992). In this instance, teachers' professional development is intricately interwoven with the daily life of the classroom—for example, as English teacher Bob Fecho (1992) engages his students in research into the relations between language and power.

Whether broadly conceived or more closely focused, these partnerships invite a re-examination of the traditionally privileged position of the university in relation to schools, and of the asymmetries in the relations between professors and schoolteachers.

Special institutes and centers. Among the accounts that teachers offer when they are asked to describe "favorable" professional development experiences, certain stories stand out. They are those that describe participation in special institutes or centers—summer institutes sponsored by NSF, for example, where teachers enjoy sustained work with ideas, materials, and colleagues, or centers such as the University of California's Lawrence Hall of Science where every activity expresses a commitment to make math and science more accessible, rich, and engaging for students, parents, and teachers. Judging by teachers' accounts, such institutes and centers offer substantive depth and focus; adequate time to grapple with ideas and materials; the sense of doing real work rather than being "talked at;" and an opportunity to consult with colleagues and experts. Some are grounded in a conception of systemic reform, their influence magnified by mechanisms that sustain connections among participants (electronic networks) and by explicit attention to the local and state contexts surrounding subject matter reforms.

By comparison to the volume of studies directed at district-sponsored training or school improvement projects, there is virtually no body of work directed toward these institutes and centers as a vehicle for teachers' professional growth and colleagueship. On the basis of anecdotal evidence, two policy issues stand out. The first is one of scale. Special institutes and centers concentrate resources, representing a greater cost per participant and a more restricted access than more modest local ventures. A note on the cost issue appears below. The second and related matter is scope or purpose—in a climate of reform, how might participation by a relative few achieve a ripple effect among a larger number in local schools and districts? Some institute sponsors more than others extend their agendas to in ways that address the realities of reform; they understand the problem of knowledge use in context. The relevant contexts include states, where graduation standards are set and curriculum frameworks promulgated. They include districts, where curriculum policy is specified and local priorities are expressed. And, most centrally, they include schools. It is a commonplace of the school workplace literature that schools are generally not organized to exert much influence on teaching practice, that collegial norms do not admit special claims to expertise, and that the social organization of daily work offers scant reason or opportunity for teachers to take much account of one another's interest in new ideas, materials, or methods (Bird and Little, 1986; Huberman, 1993). Some schools stand out as dramatic exceptions. They have been built through acts of leadership and organization, not legislated, mandated, regulated or coerced. The policy challenge is to enlarge their number.

Six principles for professional development

The strategies of professional development described above embody, each to a greater or lesser extent, certain principles that arguably stand up to the complexity of present reforms. Each principle represents a challenge to some aspect of present practice. Each is manifest in one or more of the alternatives to the conventional training model that are emerging in the context of present reform. Although stated as design principles—that is, in normative language—they are subject to the kinds of rigorous study and evaluation by which their consequences for teachers, students, and the nature of schooling might be demonstrated. Teachers' professional development might reasonably be tested against these principles:

1. ***Professional development offers meaningful intellectual, social, and emotional engagement with ideas, with materials, and with colleagues both in and out of teaching.*** This is an alternative to the shallow, fragmented content and passive teacher roles observable in much "implementation training." Teachers do not assume an active professional role simply by participating in a "hands-on" activity as part of a scripted workshop. This principle also acknowledges teachers' limited access to the intellectual resources of a community or a subject field. Thus, the subject matter collaboratives engage teachers in the study and doing of mathematics, enlarge teachers' access to mathematicians and

mathematical ideas in university or industry settings, and establish mechanisms of consultation and support among teachers.

2. ***Professional development takes explicit account of the contexts of teaching and the experience of teachers***. Focused study groups, teacher collaboratives, long-term partnerships, and similar modes of professional development afford teachers a means of locating new ideas in relation to their individual and institutional histories, practices, and circumstances. This principle thus challenges the context-independent or "one size fits all" mode of formal staff development which introduces largely standardized content to individuals whose teaching experience, expertise, and settings vary widely. The training and coaching model, which by its nature tends to *assume* the importance of its training content, grants only residual status to questions regarding the fit between new ideas and old habits, or between new ideas and present circumstances.

3. ***Professional development offers support for informed dissent.*** In the pursuit of good schools, consensus may prove to be an overstated virtue. Admittedly, deeply felt differences in value and belief can make agreements both difficult to achieve and unstable over time. At its extreme, dissent may engender a certain micropolitical paralysis (see Ball, 1987), while shared commitments may enable people to take bold action. To permit or even foster principled dissent (for example, by structuring "devil's advocate" roles and arguments) nonetheless places a premium on the evaluation of alternatives and the close scrutiny of underlying assumptions. To do so may alter that dynamic by which dissenters come quickly to be labeled as "resisters." Although specific examples do not abound, one might expect that close collaborations and long-term inquiry-oriented partnerships provide more opportunity than do training experiences for the kind of principled and well-informed dissent that strengthens both group decisions and individual choices (e.g., Nemeth, 1989).

4. ***Professional development places classroom practice in the larger contexts of school practice and the educational careers of children.*** It is grounded in a "big picture" perspective on the purposes and practices of schooling, providing teachers a means of seeing and acting upon the connections among students' experiences, teachers' classroom practice, and school-wide structures and cultures. This is a challenge to a narrowly "technological" view of curriculum reform that depends heavily on the accumulation of specific technical skills, and to the tendency to treat teachers nearly exclusively as classroom decision makers independent of larger patterns of practice. It recalls Fullan's (1991) argument that reforms or innovations are simultaneously technical and social, and underscores the balance of obligations and opportunities in teachers' professional development. Partnerships and collaboratives to a large extent engage these multiple levels and aspects of reform; special institutes do so to some extent when they help prepare teachers to assume leadership or assistance roles in their schools or districts.

5. ***Professional development prepares teachers (as well as students and their parents) to employ the techniques and perspectives of inquiry***. Without denying that there are times when technical skill training is indeed appropriate, this principle anticipates a model based more persuasively on the pursuit of knowledge. It provides the possibility for teachers and others to interrogate their individual beliefs and the institutional patterns of practice. It acknowledges that the existing "knowledge base" is relatively slim, and that our strength may derive less from teachers' willingness to *consume* research knowledge than from their capacity to *generate* knowledge and to *assess* the knowledge claimed by others. Those teacher consortia and partnerships centered most directly on teachers' research come closest to embodying this principle.

6. ***The governance of professional development ensures bureaucratic restraint and a balance between the interests of individuals and the interests of institutions***. Despite some

well-publicized exceptions such as the various subject matter collaboratives, the field is dominated by a district-subsidized marketplace of formal programs over which teachers exert little influence or in which they play few leadership roles. Further, few states or districts have any mechanism for evaluating the criteria on which resources are allocated; few have examined the ways in which the entire configuration of professional development obligations and opportunities communicate a view of schools, teachers, teaching, and teacher development. Evaluation and research, to the extent that they exist at all, tend to center on individual projects rather than on the policy import of whole patterns of resource allocation (for exceptions, see Moore and Hyde, 1981; Schlechty et al., 1982; Little et al., 1987). A principled view of resource allocation might more readily balance support for institutional initiatives, with those initiated by teachers individually and collectively.

Comparison of the training model with various alternatives suggests that there are precedents worth preserving and dilemmas worth revealing. To start, it seems we must be willing to ask : Among the formal activities or agreements that make up the most common approaches to professional development, where does one find the most ambitious reflection of the six principles? Even among the alternatives described here, some principles are more clearly evident than others. Principles 3 ("informed dissent") and 4 (the "big picture" or systemic view) prove most difficult to locate, though they are arguably central to professional development that is at once intellectually rigorous and socially responsible. What are the most challenging issues?

IV. Emerging issues

In the present reform context, three issues dominate policy considerations in the design of professional development:

> The sheer complexity of the reform tasks being proposed, together with the relative absence of tested principles, policies, and practices; the contradictions across policies; and the propensity to seize upon early-stage experiments as "models."
>
> The problem of "fit" between the task of reform and the prevailing models of professional development —in particular, the dominance of a training paradigm built on "knowledge consumption," and the lesser support for an inquiry and problem-solving paradigm built around "knowledge production."
>
> The relative inattention to teachers' "opportunity to learn" within the salaried work day and work year—an issue in the social organization of teachers' work in schools and their participation in a wider professional community.

The complexity and uneven pace of systemic reform

Complexity and ambiguity are inherent features of the more ambitious reforms, making progress uneven and difficult to detect. The picture is complicated further by the internal contradictions of the reform movement itself, e.g., in the competing views of schooling and teaching inherent in the basic skills reforms that still dominate urban reform versus the more "ambitious" outcomes embodied in the NCTM standards and in other reform initiatives that emphasize higher order thinking. Confronted with complexities, ambiguities, and contradictions, individuals and institutions move forward in fits and starts. The professional development problem mirrors the larger problem of reform in several ways.

Limited grasp of possibilities. Asked to participate in the redesign of their work and work place, participants at first invent a narrow range of responses or solutions. Michelle Fine, who chronicles the progress of Philadelphia's reform effort, says simply: "The categories people have in their heads are the categories people have in their heads" (Fine, 1992, p. 20). Inertia prevails, undergirded by established ideologies that explain and defend massive student failure (see also Fine, 1991). Such explanations "block any sense of possibility (p. 22). Even among enthusiastic teachers, Fine observes, few could imagine a "sufficiently collective effort" to produce substantial improvements in student outcomes (p. 21).

Conventional forms of professional development and support grounded in "training" are poorly conceived to help people expand the possibilities for learning, teaching, and schooling. Rarely do they contend with fundamental debates and disagreements about the purposes of schooling, the relationships between teachers and students, and the obligations of teachers to a wider larger community. It seems unlikely that teachers' sense of possibility will be enlarged in the absence of expanded information, deeper discussion and debate, and a tolerance for public dispute over fundamental matters. After three years, Fine considers it progress in Philadelphia "that at least now people are fighting aloud" (p. 21).

Policy collisions and the legacy of past reforms. Most plans for systemic reform or restructuring underestimate the sustained impact of long-standing policy and practice. Teachers and administrators witness "policy collisions" between present reforms and their predecessors, many still reflected in statute, regulation, policy, and local habit. Darling-Hammond (1990) reminds us that "policies do not land in a vacuum; they land on top of other policies" (p. 240). She notes with respect to California's new curriculum frameworks: "...several previous policy initiatives stand out sharply as competing with the new reform" (p. 237). Among them she names the state's standardized testing system, "which values a type of mathematical knowledge and performance very different from the conceptions embodied in the new Framework." (p. 237). She goes on to argue: "In several respects, policy accretion is a more difficult problem than the older problem bemoaned by reformers (which has not left us) of ingrained tradition. ... This can create an Alice in Wonderland world in which people ultimately begin to nod blithely at the inevitability of incompatible events..." (p. 238). (See also Evertson and Murphy, in press).

Pressures for fast-paced implementation. Systemic change is also undermined when local and state leaders attempt to reduce conceptual and practical complexities in the interest of a fast-paced implementation. The California curriculum frameworks serve as one example of a complex policy instrument that is experienced in distilled form by classroom teachers. In her introduction to a series of case studies of the math framework implementation, Linda Darling-Hammond (1990) observes: "The cases suggest that, at least from the vantage point of the teachers interviewed, the mathematics curriculum framework consisted of a "statement" ...and its transmission to them occurred when they were handed new textbooks, selected by the local administration after being approved by the state as compatible with the framework." (p. 236; see also Peterson, 1992).

The magnitude of the task. Observers remind us of the sheer difficulty of the reform task, and the toll that it takes on people. The work of systemic reform is enormously difficult, frustrating, slow--and rewarding. Fine (1992) says once-discouraged teachers are "back" in droves but they must contend with powerful dilemmas. They experience the frustration of doing what is while envisioning what could be—what Debbie Meier, principal at Central Park East (New York City), is famed for describing as changing the tire on a moving car. A certain amount of "institutional schizophrenia" is generated around specific institutional routines— practices of student evaluation, for example. And the burden is felt especially by

the "front runners," the ones that Schlechty would call the "trail-blazers" (Cole & Schlechty, 1992). They "offend almost every vested interest, at some point" (Fine, 1992, p. 24).

Political will. The success of the trail-blazing individuals and institutions will rest ultimately on a crucial fund of political will. Whatever the shortcomings of the knowledge base on which reform stands, we can nonetheless assert that we have sufficient knowledge to move forward; we have "the knowledge, methods, assessment strategies to transform our classrooms into engaging, critical and creative sites of intellectual growth and personal development."(Fine, 1992, p. 30). What remains uncertain is whether we have the political will to employ our knowledge in the service of public (and particularly urban) education. Professional development , in this view, will prove fruitless if it fails to cultivate and sustain political will.

The available (though rare) accounts of large-scale restructuring efforts thus underscore the *systemic* character of reform and, correspondingly, the *collective* capacity needed to achieve and sustain it . But professional development practice remains, on the whole, highly individualistic. Rates of participation vary enormously , generating "radically different profiles of professional development for teachers with comparable experience and teaching assignments (Lanier and Little, 1986, p. 548; also Arends, 1983). These differences appear to persist even in schools formally "committed" to reform initiatives.

A shift to "school-based" initiatives does not necessarily alter the variable pattern of individual practice. Schools associated with the Illinois Writing Project showed promising changes in language arts scores, but in the urban schools "typically less than half the teachers in each building attended the voluntary, after-school workshops" (Chicago Project on Teaching and Learning, 1992, p.1). What we do not learn is why. Were teachers opposed to the assumptions and practices of the Writing Project? Unimpressed with the quality of the workshops, or already expert in the practices ? Pressed by the demands of too many projects, or too burdensome a teaching load? Committed to other activities that required time, thought, and energy? Not persuaded that participation would make a difference to the students they taught? Discouraged by failures of administrative leadership? Truly discouraged about teaching?

Here we have a tension between institutional imperatives and individual prerogatives, between the conditions necessary to attempt systemic change and the conditions that engage individual teachers in their work. At best, these are in harmony; at the least, we must learn the sources of conflict between them. We will be better served by knowing the grounds on which teachers choose to participate or not. As a context for professional development, reform movements place a premium on institutional perspectives. They may absorb all of the resources available for teachers' professional development, leaving little in the way of subsidy for individually-inspired intellectual pursuits that may also, in quite different ways, make a difference to the character of schooling.

In any event, the complexities and tensions illustrated here are not resolved by any simplistic distinction between "voluntary" and "mandatory" occasions of professional development. More productive will be careful consideration of teachers' professional obligations and opportunities, of the balance and tension between individual latitude and collective endeavor, and of the resources and rewards devoted to each.

Problems of "fit:" Professional development models and the task of reform

Without becoming preoccupied by barriers to reform, we might highlight five issues that states and localities confront in matching professional development to the challenges surrounding systemic reform.

Innovation on the margins. The training paradigm dominates the world of teachers' professional development. Short-term skill training workshops far outnumber teachers' study groups and well-conceived teacher research. But the training paradigm has also come under assault: Critics charge that most training places teachers in passive roles as consumers of knowledge produced elsewhere; that the "workshop menu" is fragmented in content, form, and continuity—at precisely the time when teachers are confronted with the challenge of redesigning the way we do schooling (Moore and Hyde, 1981; Little, 1989).

Alternative approaches of the sort described above have gained the admiration of teachers, administrators, school boards, and state policy makers. Some, to be sure, have grown in stature and reach over the past decade. The history of the Bay Area Writing Project is a case in point; the BAWP model now guides a large number of local and regional projects in many states, and serves as the basis for comparable projects in math and science. It has attracted state and local district funding.

On the whole, however, innovative approaches to teachers' professional development—those that correspond most closely to the principles outlined above—remain small in scale and number. Most have been supported with private dollars (foundation and corporate funding) and have made relatively little impact on the configuration of publicly-supported professional development. Such partnerships have formed between individual activists in universities and schools or districts, or between individual consultants and schools, or between departments of education and local schools. In large institutions, multiple "partnerships" may operate in ignorance of one another's efforts, or in pursuit of quite different or even conflicting goals.

Lord (1991) maintains that the subject matter collaboratives have "magnified the impact of local resources—both human and financial," but provides no detail (p. 1). Meanwhile, the risks associated with moving from the margins to the center are well-known: teacher-centered programs such as the Bay Area Writing Project or the Los Angeles Educational Partnership's teacher networks risk "bureaucratization" when they are absorbed within district structures.

The limitations of packaged knowledge and standardized programs. Given the option, district and school administrators say they will opt for a "well-packaged program" of staff development (Little et al., 1987). Packaged programs have an understandable appeal. They are readily defended, managed, and evaluated. Most district-sponsored staff development is oriented toward the acquisition of specific knowledge and skill; assessing "impact," though it is rarely done, is relatively straightforward (especially if centered on changes in observable teacher behavior).

Alternative approaches, by comparison, are conceptually and pragmatically messier. The main benefits that participants derive from teacher networks, study groups, curriculum experiments, and the like may be more broadly intellectual, motivational, and attitudinal. By acknowledging the importance of teachers' intellectual curiosities and capacities, and by crediting teachers' contributions to knowledge and practice, such approaches may strengthen

the enthusiasm teachers bring to their work and the intellectual bent they display in the classroom. Over the long run, teachers who participate in experiences of this sort might be expected to show higher rates of classroom innovation and to inspire greater enthusiasm for learning on the part of their students. Nonetheless, appropriate comparisons with conventional staff development are likely to prove very difficult. This is due in part to differences in program aims, content, and format, and due in part to the difficulty of tracing the crucial longer-term consequences for individual teachers.

The proliferation of classroom- and school-based studies over the past two decades has fed the organized professional development marketplace. "Research says" is a common preface to many workshop presentations and exercises, serving as a warrant for recommended practice. But "research says" has increasingly become a means for exercising institutional authority rather than for informing teachers' judgments or framing their own inquiries. Teachers are typically less well positioned than district specialists or outside consultants to invoke research (or challenge it) as a warrant for action—they have less routine access to sources of research, less time to read and evaluate it, and less familiarity with its arcane language.

What is inevitably hidden in the effort to "translate" research are all the ways in which the research findings conflict, or are limited by design flaws, or reflect particular conceptions of the phenomena under study. What also is missing is an invitation to teachers to act not only as consumers of research but also as critics of research and producers of research—to be participants in a more visible and consequential manner. An alternative to the formulation "research says," reads something like: "The way this question has been framed in most research is..." Or: "There are three main approaches to this problem in research so far. Here's what each has produced..." These formulations leave open the possibility that the available research knowledge is incomplete and that there is room for discovery. They neither romanticize teachers' knowledge nor unduly privilege researchers' claims.[3]

The status of the "knowledge base" in support of systemic reform is uncertain. Some argue that the base is strong, others that it is more hortatory and ideological than it is theoretically coherent or empirically defensible. Advocates of reform argue that we know enough to make considerable difference in the ways that students experience school and the benefits they derive from schooling. Whatever the strength of that claim, it also seems certain none of the knowledge we assert will be adequate to account for the complexities of any specific context, and that there is no substitute for local invention and inquiry. These circumstances prompt various responses to the burgeoning "teacher research" movement (not the first such movement in this century). In recent symposia on the subject, debate revealed widely diverse and competing views teachers' preparation to engage in "research," the nature of research topics and methods, conventions associated with legitimation of research, and issues surrounding the political control of research agendas and products (see Hollingsworth and Sockett, in press).

Phillip Schlechty is fond of observing that we are still confined by unworkable conceptions of school and school improvement, much as if NASA had decided that we could get to the moon by funding improvements in the internal combustion engine.[4] In the allocation of professional development resources, we find a tremendous reliance on "research-based" solutions, on being able to give assurances of certainty. Our own voyage to

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[3]On the problems of the former, see Buchmann, 1990; and for an example of a challenge to researchers' privileged standing in the reform discourse, see Nespor and Barber, 1991.

[4] I have recalled this example from various speeches, but Schlechty (1990) elaborates the basic argument.

the moon may require that we abandon our reliance on the present base of "consumable" research and expand our support for arrangements for teachers' involvement in the explication, invention, and evaluation of local practice.

The dominance of "training" over problem solving. States and local school districts have learned—in part, anyway— the lesson of the "implementation problem" and the importance of adequate local support. In the late 1970s, one could reasonably charge that "many... education reform efforts fell short primarily because planners seriously underestimated teacher training needs" (McLaughlin and Marsh, 1979, p. 69). An adequate supply of well-conceived training opportunities seemed a major contributor to implementation success. More than a decade later, we boast a more sophisticated understanding of the implementation problem, casting it as a complex interaction between external policy variables (clear statutes, effective authority, and the like) and the micro-contexts shaped by individuals' and groups' commitments, histories, and politics (McLaughlin, 1987, 1990; see also Ball, 1987). Our conception of implementation has evolved "from early notions of implementation as transmission or as a problem of incentives or authority to conceptions of implementation as bargaining and transformation" (McLaughlin, 1987, p. 175). Looking back at the celebrated Rand Change Agent Study (1973-1978) from a vantage point of nearly fifteen years, McLaughlin (1990) expresses a certain skepticism about the power of policy mandates, especially those that take the form of special projects aimed at "discrete elements of the education policy system" instead of embracing the systemic nature of problems and the systemic character of local practice (pp. 14-15).

But districts' strategies for reform, at least with regard to teachers' professional development, do not appear to capitalize fully on what we have learned about the importance and variability of local contexts and about the transformational nature of reform. "Inservice" activities tend to be linked to special projects or to discrete components of "reform," and to embody a relatively traditional conception of classroom experience. The most sophisticated of these make some provision for follow-up in the form of classroom consultation and coaching.

The training-and-coaching strategy that dominates local professional development has much to recommend it when considered as a balanced part of a larger configuration, and when linked to those aspects of teaching that are properly rendered as transferable skills. But the training model is problematic. The content of much training communicates a view of teaching and learning that is at odds with present reform initiatives. It is not at all clear, for example, that any form of training is adequate to develop the "substantive conversation" that Newmann (1990) envisions (see also Hargreaves and Dawe, 1990). Nor is the content of training set against the content of local belief, practice, and policy in any meaningful and detailed way. In addition, principles of "good training" are frequently compromised in practice. In particular, schools and districts demonstrate far less capacity for classroom consultation and support than is required by the training and coaching model. Those persons typically designated as "coaches" or "mentors" are far outnumbered by their clientele of regular classroom teachers. They are further constrained by school workplace cultures that perpetuate a norm of privacy and constrain advice-giving (Little, 1990b). Finally, to attain results from the training/coaching model requires a consistency of purpose and a coordination of effort that is not the norm in many districts. Rather, districts parade a litany of short-term goals in their response to various state mandates and incentives, local constituencies, or the individual enthusiasms of superintendents, school board members, or others.

Having launched such criticisms, I want to reiterate that the skill training and coaching model to which so many districts seem wedded has demonstrated consistent results in those cases where training content can be represented as a repertoire of discrete practices,

and where classroom performance is oriented toward specified student outcomes. At their best, local activities incorporate the wealth of research on effective training and support that we can trace to the various "implementation of innovation" studies and to studies of specific professional development ventures (Guskey, 1986; Showers, Joyce, and Bennett, 1987; Romberg and Price, 1983; Sparks, 1986; Smylie, 1988; Sparks and Loucks-Horsley, 1990). Nor are these remarks in any way meant to impugn the knowledge, skill, thoughtfulness, or good intentions of those persons designated by local districts as staff development specialists, coaches, mentors, and the like. Rather, the aim is to record the dominance of the training model, the possibilities it offers, and the constraints on its effectiveness.

Conceptions of cost or "investment". Policy makers require a way of making sense of costs—or more persuasively, investments. This note centers on issues surrounding the allocation of discretionary resources—the monetary expenditures that typically come to mind when persons consider staff development budgets. "Direct monetary expenditures" includes only those costs directly and necessarily associated with program operations; these include staff salaries, workshop presenters, substitutes, and facilities. (For a broader conception of investment and its relation to policy considerations, see Stern, Gerritz, and Little, 1989; and Little, 1992b). One straightforward way to compare "costs" is to divide the direct monetary expenditure by the number of actual participants to arrive at a per participant cost. By this calculation, the per participant cost of some special projects may exceed $2000.

How does this figure compare to the average per teacher investment in professional development? In relative cost terms, institutes and retreats are an expensive venture; ongoing local study groups and after-school workshops are not. The average per teacher investment of direct monetary expenditures in California in 1985-86 (the only year for which such estimates are available) was approximately $900 (Little et al., 1987). That is, the total annual professional development of the average California teacher was subsidized by approximately $900 in public monies over a single fiscal year. A program that invites 25 teachers to a retreat for 5 days will invest more than one and a half times the resources per participant in 3-5 days than local districts typically invest in an entire year of a teacher's professional development.

The "average teacher" figure is, of course, something of a fiction; resources are not distributed uniformly. Experimental programs typically invest higher amounts in smaller cadres of teachers. The most prominent example in California at present is the California Mentor Teacher Program, which allocates approximately $6000 per year to each teacher selected as a mentor. The mentor program's per participant investment is thus nearly 7 times the average per teacher expenditure. (Two-thirds of that allocation goes directly to the teacher as a stipend; the remaining third is allocated to the district in support of the mentor's work). The program reflects an implicit policy wager: that concentrating resources on fewer than 5% of the state's teachers will yield benefit for the remaining 95% (see also Little, 1990b). The legislative intent attached to the mentor program outlines a set of obligations to beginning teachers, experienced teachers, and curriculum development; to the extent that mentors meet these obligations, they generate a "ripple effect" that lowers the per participant cost. That is, to the extent that the effects extend beyond those individuals who are the primary participants, the per teacher cost is appreciably lower than the per participant cost.

Investments beyond the ordinary (that is, narrow concentrations rather than broad distribution of resources) are more defensible if they can meet one of three criteria: (1) they can be credibly tied to a ripple effect (so that per teacher cost is demonstrably lower than per participant cost); (2) one can claim that the direct individual benefit of this specific program is far more certain than the benefit linked to conventional funding; or (3) the program contributes in demonstrable ways to increased organizational capacity in ways that transcend the impact on those individuals who participate directly in the "program."

The state and other players. When we consider levels of policy intervention and influence, we quickly find the state and the district to be the most prominent players in defining and promoting reform, and in sponsoring formal occasions of professional development. In the past decade, states have assumed greater prominence in shaping reform initiatives. This is not to say that state policy offers a coherent vision of the fit between teacher policy and various reform ventures (Little et al., 1987). Nor is it clear that state agencies and legislatures have given much consideration to the various possible forms that a state presence might take—though in some of the more policy active states, such as Connecticut, Kentucky, California, and Oregon, the traditional impetus toward regulatory control is increasingly tempered by a role centered around the supplying information and incentives for local experimentation.

On the whole, however, states and districts have been relatively slow to reshape professional development in ways that respond to the complexities and ambiguities of reform. Much reform legislation reflects a tension between incentives and control, between provisions that expand teachers' leadership opportunities (for example, California's mentor teacher program) and provisions that tighten external controls over teaching and teachers. (for example, new credentialing requirements or curriculum standards). On the whole, the incentives are attached to small, voluntary, and peripheral activities, while the controls embrace the entire teacher workforce and shape more central aspects of their work. In this asymmetry between support and control we may find some evidence of a pervasive skepticism among policy makers about teachers' capacities and motivations, and thus a certain reservation about professional development strategies that measurably expand teachers' collective autonomy.

Meanwhile, the responsibility and resources for teachers' professional development have for several decades (since the mid-sixties' federal social reform legislation) resided primarily with districts—that is, with the employing organization.[5] The shift to the school site brings control over resources closer to the classroom and increases the possibility that content and context might be more closely joined. Altogether, the profoundly local character of much reform activity would seem to offer substantial opportunity to create and support alternative modes of professional development—those that enable local educators to do the hard work of reinventing schools and teaching. But there is no guarantee of that. If the established marketplace of training options fits poorly with the demands of reform, it nonetheless fits reasonably well with bureaucratic structures of accountability (by providing a record of "participation"). If a menu of workshops fits poorly with the long-term vision and capacity required by genuine reform, it responds well to the short-term incentive structure and resource allocation scheme. Finally, staff development at the local level, despite the pervasive rhetoric of change, serves in large part as a vehicle of organizational maintenance--a point worth remembering in the surge of interest toward reform (Schlechty and Whitford, 1983).

States and districts have emerged as the most visible and powerful players on the reform landscape. Less visible but potentially influential in achieving the fit between reform requirements and teachers' professional development are the various professional

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[5]The steady shift away from participation in university coursework and toward district-centered activity can be attributed only in part to changes in the age distribution of the teacher workforce. Over the past two decades formal staff development has become district business, conducted largely by specialists located in a district's central office (Moore and Hyde, 1981). Teachers are more likely to choose from a menu of district-sponsored workshops than they are to receive release time or other individual subsidies to attend conferences hosted by subject area associations or institutes sponsored by universities (Little et al., 1987).

associations (teachers, administrators, other specialists, and school boards) and organizations representing business and industry. Foundations have been active in the support of various reform efforts, including those devoted to teachers' professional development, but it is only very recently that they have begun to join directly with states in pursuit of a reform agenda (Lagemann, 1992). Of particular interest and import is the increasingly powerful influence exerted by teachers' subject matter associations (perhaps most prominently, NCTM) in shaping reforms in curriculum, assessment, and standards for teacher certification. Yet the place of subject matter associations in the lives and careers of teachers, and especially in preparing them to engage meaningfully and productively in reform, remains largely unexamined in the research and policy literature; recent case studies of the various mathematics collaboratives may signal a shift (Lord, 1991; Salmon-Cox and Briars, 1989). On the whole, however, available evidence suggests a weak connection between those subject associations and the main providers of professional development (the districts, private vendors, and universities).

The disposition of the unions toward these major reform initiatives —and particularly any response they may have made in the form of teachers' professional development— is largely undocumented. In interviews with union leaders in thirty California districts, conducted in 1986 (Little et al. 1987), we found that most locals concentrated on constraining administrators' access to teachers' time for purposes of school- or district-initiated staff development. We found no examples of a more affirmative or proactive involvement in substantive programs of teacher development although some promising exceptions have emerged since that study was completed, e.g., in the form of the policy trust agreement projects established in California (Koppich and Kerchner, 1990). Nor do we know much about the relative salience of the union compared to other sources in shaping teachers' response to or involvement in reform initiatives (Bascia, 1992). One is struck by some countervailing currents. First, the unions have responded to escalating pressure to balance a concern with personnel issues (compensation and other conditions of employment) with responsible attention to matters surrounding professional practice. Second, the unions have become more frequent and prominent players in shaping the reforms in teaching at the state or national level—most often those having to do with the preparation and licensure of teachers. Their involvement at the local level is less clear, and certainly more uneven. Among the issues most germane to the major reforms discussed here are perceived constraints on teacher autonomy with regard to curriculum and instruction, and challenges to the deep-rooted egalitarianism of teachers that arise in various career ladder and mentorship schemes.

We thus have multiple players and multiple levels of policy and practice. Two major questions seem germane. First, what "fit" between reform and professional development is best achieved at each level or niche in the policy system, and through what policy mechanism? To what extent does policy making in each arena rely on regulation or persuasion? Second, in what ways and to what extent are the various policy orientations congruent or in conflict? For example, university faculty have maintained an avid interest in the development of state curriculum frameworks— yet university admission requirements have also been said to exert a "chilling effect" on innovation in the K-12 curriculum (Grubb, personal communication). That is, colleges and universities may simultaneously foster and impede reform. At the local level, a district's interest in "comprehensive restructuring" may operate to displace small, vital pockets of initiative by teachers in individual schools.

The school work place and teachers' opportunity to learn

Concentration on formal programs of professional development tends to obscure issues of obligation, incentive, and opportunity in the salaried work day and work year. Investigation

of teachers' instructional assignments, ratio of in-class to out-of-class time, and school-level affiliations (departments, grade levels, friendship nets) provides us both with a perspective on *motivation or pressure to learn* and with a description of those *opportunities to learn* that are embedded in the social organization of schools (Little, 1990a; see also Hargreaves, 1990; Glidewell et al., 1983; Smylie, in press).

Teachers' central reasons and opportunities for professional development begin with the teaching assignments they acquire, the allocation of discretionary time, and other work conditions encountered day-by-day. They begin, that is, with a teacher's experience of what it is to teach and to be a teacher—in general, and in particular circumstances. To some large degree, it is only in relation to the daily experience of teaching that one can anticipate the contributions of more structured opportunities that range from independent reading to formal coursework, conference attendance, skill training workshops, leaves or sabbaticals, participation in committees or special projects, and scheduled consultation with colleagues.

Reform movements tend to orient us toward an institutional (and largely functionalist) perspective. By this perspective, the schools' capacity for supporting the professional development of teachers is expressed in a system of obligations, opportunities, and rewards. Teachers' obligations for professional preparation and development reside formally in certification and recertification requirements, teacher evaluation standards, and other personnel policies and practices. They are communicated informally by institutional norms regarding teachers' performance.

In privileging the institutional and collective view, however, the language of reform underestimates the intricate ways in which individual and institutional lives are interwoven. It under-examines the points at which certain organizational interests of *schools* and occupational interests of *teachers* may collide. Critics of reform movements stress the tendency to "de-skill" teaching and a corresponding tendency to legitimate institutional surveillance and coercion under the rubric of "vision" and "instructional leadership" (Carlson, 1992; Hargreaves, 1992). Carlson (1992) describes the principled opposition mounted by a teachers' association to the "specter of standardization" they detected in basic skills reforms built around programmed materials, prearranged objectives, and batteries of standardized tests (p. 113). Smylie and Smart (1990), examining sources of support for and opposition to merit pay and career ladders, note that "the primary beliefs and assumptions that guide the development of relationships among teachers include norms of independence and professional equality" and it is naive to suppose that such programs will generate widespread support unless they resolve "social and normative incongruities." (p. 152, 153). Each of these cases is consistent with the observation that members of an occupational community may find that "what is deviant organizationally may be occupationally correct (and vice versa)" (Van Maanen and Barley, 1984, p. 291).

As the arena in which teaching traditions and reform imperatives confront one another most directly and concretely, the school workplace is both the most crucial and the most complex of domains in which we play out the possibilities for teachers' professional development. Teachers' motivations, incentives, and frustrations come foremost from the immediacy and complexity of the classroom: teachers' responses to the students they teach and the circumstances in which they teach them. Idiosyncratic classroom realities may take precedence over broader institutional interests, leading teachers to protect a "strategic" or "elective individualism" (Hargreaves, 1993; see also Flinders, 1988). The impetus to protect one's autonomy may be intensified by various circumstances surrounding collegial and institutional life—the norms underlying peer acceptance and admiration, and the fabric of relations between teachers and administrators. The Academics and Coaches who make up the dominant cliques in Bruckerhoff's (1991) social studies department at Truman High express quite different teaching priorities, but they have in common their selective resistance

to administrative pressures. Clearly, taking the workplace seriously requires more than shifting staff development resources and activities to the school site.

Conclusion

Five streams of reform present a challenge of considerable complexity, scope, and ambiguity. Yet the present pattern of professional development activity reflects an uneven fit with the aspirations and challenges of present reform initiatives in subject matter teaching, equity, assessment, school organization, and the professionalization of teaching. Much "staff development" or "inservice" communicates a relatively impoverished view of teachers, teaching, and teacher development. Compared to the complexity, subtlety, and uncertainties of the classroom, professional development is often a remarkably low-intensity enterprise. It requires little in the way of intellectual struggle or emotional engagement, and takes only superficial account of teachers' histories or circumstances. Compared to the complexity and ambiguity of the most ambitious reforms, professional development is too often substantively weak and politically marginal.

Professional development must be constructed in ways that deepen the discussion, open up the debates, and enrich the array of possibilities for action. Ground for optimism resides in those "innovations on the margin" that embody principles consonant with the complexity of the reform task and with the capacities and commitments of a strong teacher workforce.

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